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Response to Official Action

In the Drawings

There are no amendments to the drawings.

Remarks

Applicant has amended Claims 1, 15, 40 and 44. Applicant respectfully submits that no new matter was added by the amendment, as all of the amended matter was either previously illustrated or described in the drawings, written specification and/or claims of the present application. (See, p. 4, lines 19-21). Entry of the amendment and favorable consideration thereof is earnestly requested.

As amended, Claim 1 recites “said array of detectors comprising up to 100 individual detector elements.” Claim 25 recites “said an array of up to 100 individual detector elements.” Claim 40 recites “said detector comprising up to 100 individual detector elements.” Claim 44 recites “an array of up to 100 individual detector elements.” Applicant respectfully submits that none of the cited prior art teaches or discloses these limitations.

The examiner has submitted that U.S. Patent No. 6,274,871 (“Dukor”) teaches “a small array of individual detector elements (element 92).” (Official Action, p. 2). However, Applicant respectfully submits that Dukor teaches that “the focal-plane array detector 62 uses a mercury-cadmium-telluride (MCT) infrared detector chip with 64x64 pixels.” (Col. 4, lines 43 – 45). This array then, comprises approximately 4096 detectors. This is exactly the type of extremely expensive system the present invention identified should be avoided stating “[i]n order to reduce measurement times microscopes have been designed which incorporate large detector arrays rather than single detector elements. One such arrangement uses an integrated array of 64x64 liquid nitrogen

cooled photovoltaic MCT detectors each having an area of 60 microns square . . . such arrangements however are extremely expensive and typically cost more than 3 times that of a microscope with employs a single detector." (p. 2, line 19 - p. 3, line 7). Accordingly, all the claims of the present invention recite a detector having "up to 100 individual detector elements."

Applicant further respectfully submits that U.S. Patent No. 6,396,048 ("Schanz") also fails to teach or suggest a detector having "up to 100 individual detector elements" as recited by all of the pending claims.

Accordingly, Applicant respectfully submits that, because neither Dukor nor Schanz teach, disclose or suggest a detector having "up to 100 individual detector elements" as recited by all of the pending claims, no combination thereof can render the pending claims obvious.

Claim 1 recites "the outputs of the detector elements being directly fed in parallel to processing circuitry." Claim 25 recites "an array of up to 100 individual detector elements the outputs of which are directly fed in parallel to image processing circuitry." Claim 40 recites "the outputs of the detector elements being directly fed in parallel to image processing circuitry." Claim 44 recites "the outputs of the detector elements being directly fed in parallel to image processing circuitry."

It is also well settled that if a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). In this case, modification of Dukor in view of Schanz to include parallel feeding of 4096 detector outputs would not result in a system with reduced costs and complexity, but rather would further increase the cost, complexity and size of the system. (See, p. 2, line 19 - p. 3, line 7). It is not even certain if such a system could be fabricated, let alone be obvious.

Further, Claims 1 and 40 additionally recite "each detector element having its own associated detection circuitry." Therefore, based on the Examiner's suggested modification, combined system of Dukor and Schanz would have to include 4096 individual detection circuits. Again, the increased size, cost and complexity of the system could not render such a modification obvious, in fact, it is uncertain whether such a system could even function.

Accordingly, because the suggested combination of Dukor with Schanz would result in a system of greatly increased cost, size and complexity, Applicant respectfully submits that such a combination cannot be obvious.

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For all of the above reasons, it is respectfully submitted that claims 1, 3-13 and 25-44, all of the claims remaining in the application, are in order for allowance and early notice to that effect is respectfully requested.

Respectfully submitted,

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